Notice of Allowability	Application No.	Applicant(s)	
	10/065,740	AKKARAM ET AL.	
	Examiner	Art Unit	
	Ayal I. Sharon	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *After Final Amendment filed 10/27/2006*.

2. ☒ The allowed claim(s) is/are *1-19,21-29 and 40-48*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *20061115* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Introduction

1. Claims 1-19, 21-29, and 40-48 of U.S. Application 10/065,740 are currently pending.

Examiner's Amendment

2. Applicant's after-final amendment filed on 10/27/2006 has been entered.
3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
4. Authorization for this examiner's amendment was given in a telephone interview with Mr. Tait Swanson, Reg. No. 48,226 on 11/15/2006.
5. The following are the examiner's amendments to claims 1, 5-7, 10, 21, 28-29, and 46-48.

1. (currently amended) A method for ~~performing new material development~~ simulating new materials, the method comprising:

receiving a user simulation scenario from a user, wherein:

said user simulation scenario is in a-cyclic graph format and includes a plurality of material development modules represented as vertices including a starting module, wherein the material development modules comprise material design and testing modules configured to predict material characteristics resulting from one or more material design simulations;

each said vertex includes material characteristic data information including at least one input file source and at least one output file destination;

relationships between said modules are represented as edges;

each said edge includes at least one of previous module and subsequent module; and

each said edge includes data flow information between said previous module and said subsequent module;

receiving a request to invoke said user simulation scenario, wherein said request includes said input file source for said starting module;

traversing said vertices along said edge in response to receiving said request and to said data flow information, wherein said traversing includes executing said modules associated with each said vertex beginning with said starting module in an order specified by said ~~edges~~ edges, and said executing produces results including material characteristic ~~being~~ data written to said output file destination for each said vertex; and

outputting the results to a central workstation ~~to enable~~ for collaborative material development via one or more remote user interfaces.

5. (currently amended) The method of claim 4 wherein said providing includes allowing said user to browse all or a subset of said material characteristic data written to said output file destination for each said vertex and said input file source.

6. (currently amended) The method of claim 4 wherein said providing includes transmitting all or a subset of said material characteristic data written to said output file destination for each said vertex and said input file source.

7. (currently amended) The method of claim 1 further comprising providing said user with access to a common materials development database that includes said material characteristic data written to said output file destination for each said vertex and said input file source.

10. (currently amended) The method of claim 7 wherein said common materials development database includes said material characteristic data information.

21. (currently amended) A system for ~~performing new material development~~ simulating new materials, the system comprising:

a network;

a user system in communication with said network;

a first storage device including a database component; and

a first host system in communication with said network and said storage device, said first host system including an integration component configured to:

receive a user simulation scenario from a user system via said network, wherein:

said user simulation scenario is in a-cyclic graph format and includes a plurality of material development modules represented as vertices including a starting module;

each said vertex includes material characteristic data information including at least one input file source and at least one output file destination;

relationships between said modules are represented as edges;

each said edge includes at least one of previous module and subsequent module; and

each said edge includes data flow information between said previous module and said subsequent module;

receive a request to invoke said user simulation scenario via said network, wherein said request includes said input file source for said starting module;

traverse said vertices along said edges in response to receiving said request and to said data flow information, wherein said traversing includes executing said modules associated with each said vertex beginning with said starting module in an order specified by said ~~edges~~ edges, and said executing produces results including material characteristic ~~being~~ data written to said output file destination located on said database component for each said vertex; and

output the results to the user system, or the first storage device, or the first host system, or a combination thereof, ~~to enable~~ for collaborative material development via one or more remote user interfaces.

28. (currently amended) A ~~tangible~~ computer-readable medium for ~~performing new material development~~ simulating new materials, the ~~tangible~~ computer-readable medium comprising:

a storage medium readable by a processing circuit and storing instructions for execution by the processing circuit configured to:

receive a user simulation scenario from a user, wherein:

said user simulation scenario is in a-cyclic graph format and includes a plurality of material development modules represented as vertices including a starting module, wherein the material development modules comprise material design and testing modules configured to predict material characteristics resulting from one or more material design simulations;

each said vertex includes material characteristic data information including at least one input file source and at least one output file destination;

relationships between said modules are represented as edges;

each said edge includes at least one of previous module and subsequent module; and

each said edge includes data flow information between said previous module and said subsequent module;

receive a request to invoke said user simulation scenario, wherein said request includes said input file source for said starting module;

traverse said vertices along said edges in response to receiving said request and to said data flow information, wherein said traversing includes executing said modules associated with each said vertex beginning with said starting module in an order specified by said ~~edges~~ edges, and said executing produces results including material characteristic ~~being~~ data written to said output file destination for each said vertex; and

output the results to a central workstation ~~to enable~~ for collaborative material development via one or more remote user interfaces.

29. (currently amended) The ~~tangible~~ computer-readable medium of claim 28, wherein said instructions are built based on an object oriented framework.

46. (currently amended) The ~~tangible~~ computer-readable medium of claim 28, wherein said material development modules comprise material modules including tools configured to test precipitation, grain size, phase analysis, grain growth, or combinations thereof.

47. (currently amended) The ~~tangible~~ computer-readable medium of claim 28, wherein said material development modules comprise property modules including tools configured to test flow stress, low cycle fatigue, ultimate tensile strength, tensile strength, or combinations thereof.

48. (currently amended) The ~~tangible~~ computer-readable medium of claim 28, wherein said material development modules comprise a material module, a property module, a cost and performance model, an error propagation model, or combinations thereof.

Examiner's Statement of Reasons for Allowance

6. Claims 1-19, 21-29, and 40-48 are allowed.

7. The following is an examiner's statement of reasons for allowance for independent claims 1, 21, and 28. All of the other claims depend from these independent claims.

8. The prior art referred to in this Reasons for Allowance is as follows:

   a. Lystad et al., U.S. PG-PUB 2005/0192783. ("**Lystad**").

b. Wang, Lihui et al. "A Java 3D-Enabled Cyber Workspace." Communications of the ACM. Nov. 2002, Vol.45, Issue 11, pp.45-49. ("**Wang**").

9. Applicant's arguments regarding the rejections of independent claims 1 and 28 based on the Lystad reference are persuasive. (See pp.13-14 of the after-final amendment filed 10/27/2006).

10. Applicant's arguments regarding the rejection of independent claim 21 is persuasive. The argument is that the Wang reference, used in a 35 USC § 103 rejection, does not provide the specific day of publication, and since it was published in the same month as the instant application, does not qualify as prior art. (See p.18-19 of the after-final amendment filed 6/12/2006).

11. Examiner interprets that the "storage medium" in claim 21 refers to the "storage medium" defined in paragraph [0037] of the specification, and not to the "transmission medium" defined in the same paragraph. Examiner finds that the "transmission medium" is not statutory according to "Interim Guidelines on Subject Matter Eligibility."

12. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ayal I. Sharon whose telephone number is (571) 272-3714. The examiner can normally be reached on Monday through Thursday, and the first Friday of a biweek, 8:30 am – 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached at (571) 272-3753.

Any response to this office action should be faxed to (571) 273-8300, or mailed to:

USPTO
P.O. Box 1450
Alexandria, VA 22313-1450

or hand carried to:

USPTO
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center 2100 Receptionist, whose telephone number is (571) 272-2100.

Ayal I. Sharon
Art Unit 2123
November 15, 2006

PAUL RODRIGUEZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

11/16/06